Installation Manual for the Kit Aster 3Ti/4Ti/5Ti 230v Model

Double Gate Automation

EC Compliance Declaration

The manufacturer **PROTECO S.r.l.**
Via Neive 77 - 12050 Castagnito ITALY

declares hereby

The articulated arm electromechanical gearmotors, model: ASTER
in accordance with the following Directives

98/37/EU	Machine Directive (formerly 89/392/EEC)
89/336/EEC	EMI Directive (with 91/263/EEC, 92/31/EEC, 93/68 EEC amendments)
73/23/EEC	Low Voltage Directive (with 93/68/EEC amendments)

The following technical standards were applied,
UNI EN 12445
UNI EN 12453

The manufacturer declares moreover that the components described above may not be put into service before the machine in which they are incorporated has been identified and declared to comply with the provision of directive 98/37/EC.

Castagnito, 15.01.2006

Gabriele Proglio
Managing Director

⚠ IMPORTANT SAFETY INSTRUCTIONS ⚠

Gate equipment has hazards associated with its use and therefore by installing this product the installer and user accept full responsibility for following and noting the installation and safety instructions. Failure to follow installation and safety instructions can result in hazards developing due to improper assembly. You agree to properly install this product and that if you fail to do so Gate Motors shall in no event be liable for direct, indirect, incidental, special or consequential damages or loss of profits whether based in contract tort or any other legal theory during the course of the warranty or at any time thereafter. The installer and/or user agree to assume responsibility for all liability and use of this product releasing Gate Motors from any and all liability. If you are not in agreement with this disclaimer or do not feel capable of properly following all installation and safety instructions you may return this product, within ***7 working days*** from date of purchase for full replacement value.

READ ALL INSTRUCTIONS CAREFULLY AND COMPLETELY before attempting to install and use this automatic gate opener. This gate opener produces a high level of force. Stay clear of the unit while it is operating and exercise caution at all times.

All automatic gate openers are intended for use on vehicular gates only and for no other purpose and forms the basis for the 1 year guarantee.

For more information on GateMotors full line of automatic gate openers and access controls visit our website at www.gatemotors.co.uk

Phone Sales Lines
UK: 01202 717191 Outside UK: (+44)1202 717191

Phone Technical Lines
UK: **0905 235 1700*** (service available 8:30am to 5:30pm Monday to Friday only, closed Weekends and Public Holidays)
ROI: **156 099 9667**** (service available 8:30am to 5:30pm Monday to Friday only, closed Weekends and Public Holidays)
Email: support@gatemotors.co.uk

*UK calls to this number are billed by the second and cost £1.02 per minute from a standard landline; other networks charges may also apply.
**IRISH calls to this number are billed by the second and cost €1.25 per minute from a standard landline; other networks charges may also apply.
Service is provided by Digital Select Ltd, 271 Regent Street, London, W1B 2ES whose helpline number is 0844 448 0165

Trading address: GateMotors UK, Unit 16c, Chalwyn Industrial Estate, St. Clements Road, Poole, Dorset. BH12 4PE.
***GateMotors** is the trading name of Screwjack Limited - registered office at 21 Oxford Road, Bournemouth, Dorset. BH8 8ET. Registered # is 4287804, VAT #:785 3450 06*

Quick Reference: Measurement Charts

Conversion Chart

Converting Metric Units to English Equivalents

When You Know	Multiply By	To Find	Symbol
centimeters	0.3937	inches	in. (or ")
meters	3.2808	feet	ft. (or ')
kilograms	2.2046	pounds	lb. (or #)

Converting English Units to Metric Equivalents

When You Know	Multiply By	To Find	Symbol
inches	2.5400	centimeters	cm
feet	0.3048	meters	m
pounds	0.4535	kilograms	kg

Converting Temperature

deg. Celsius	(ºC x 1.8) + 32	deg. Fahrenheit	ºF
deg. Fahrenheit	(ºF-32) ÷ 1.8	deg. Celsius	ºC

Feet	Metres
1	0.30
2	0.61
3	0.91
4	1.22
5	1.52
6	1.83
7	2.13
8	2.44
9	2.74
10	3.05
11	3.35
12	3.66
13	3.96
14	4.27
15	4.57
16	4.88
17	5.18
18	5.49
19	5.79
20	6.10

CM	MM
1	10
2	20
3	30
4	40
5	50
6	60
7	70
8	80
9	90
10	100
11	110
12	120
13	130
14	140
15	150
16	160
17	170
18	180
19	190
20	200

PLEASE READ THIS FIRST!

Thank you for purchasing the Kit Aster 3Ti/4Ti/5Ti gate automation. The gate kit is designed to be a "*do-it-yourself*" automatic gate opener kit. When correctly installed and properly used, your GateMotors Kit Aster 3Ti/4Ti/5Ti will give you many years of reliable service. Please read the following information to enable you to properly install your gate automation system.

The Kit Aster 3Ti/4Ti/5Ti gate automation is designed for installation on a pull-to-open double leaf gate (gates that open into the property). The motors can be used on vinyl, aluminium, farm tube and wrought iron gates.

The Kit Aster 3Ti/4Ti/5Ti gate automation accommodates extra transmitters, digital keypads, push buttons, automatic gate locks (additional MEL interface required), and other access control products listed on GateMotors website. The optional accessories are available through our website www.gatemotors.co.uk. GateMotors popular accessories are featured at the end of this installation guide with full details available from the GateMotors website and upon request.

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IMPORTANT SAFETY INSTRUCTIONS

Because automatic gate openers produce high levels of force, consumers need to know the potential hazards associated with improperly designed, installed, and maintained automated gate opener systems. Keep in mind that the gate opener is just one component of the total gate operating system. Each component must work in unison to provide convenience, security, and safety.
This manual contains various safety precautions and warnings for the consumer.

Because there are many possible applications of the gate opener, the safety precautions and warnings contained in this manual cannot be completely exhaustive in nature. They do, however, provide an overview of the safe design, installation, and use of this product.

Carefully read and follow all safety precautions, warnings and installation instructions to ensure the safe system design, installation and use of this product.

Precautions and warnings in this manual are identified with this warning symbol. The symbol identifies conditions that can result in damage to the opener or its components, serious injury, or death. Because ***GateMotors*** automatic gate openers are only part of the total gate operating system (as intercoms, push button switches and GSM switches etc. Can be added to complete an "*operating system*"), it is the responsibility of the end user to ensure that the total system is safe for its intended use.

For The End User

A. <u>WARNING: To reduce the risk of injury or death:</u>

A1. Read and follow all instructions. Failure to meet the requirements set forth in the instruction manual could cause severe injury and/or death, for which the manufacturer cannot be held responsible.

A2. When designing a system that will be entered from a main road or main thoroughfare, make sure the system is placed far enough from the road to prevent traffic congestion

A3. The gate must be installed in a location that provides adequate clearance between it an adjacent structure(s) when opening and closing to reduce risk of entrapment / crushing.

Swinging gates must not open into public access areas.

B. <u>Before installing the gate automation:</u>

B1. Make sure the gate has been properly installed and swings freely. The gate automation is designed to move the gate so you do not have to. Repair or replace all worn or damaged gate hardware prior to installation. A freely moving gate will require less force to operate and will enhance the performance of the opener and safety devices used with the system.

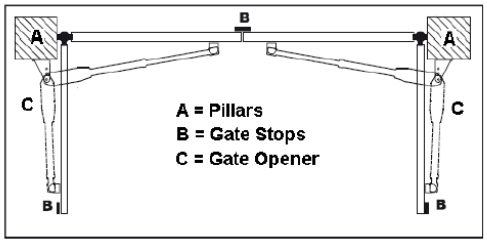
B2. Review the operation of the system to become familiar with its safety features. Understand how to disconnect the opener for manual operation in the event of power failure and accidents.
(SEE PAGE 14)

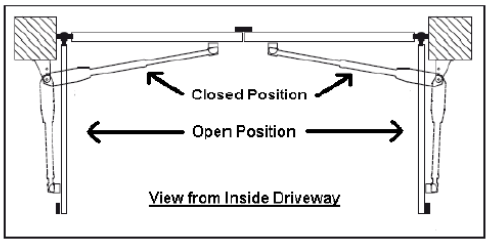
B3. The gate opener is intended for vehicular gates **ONLY**.

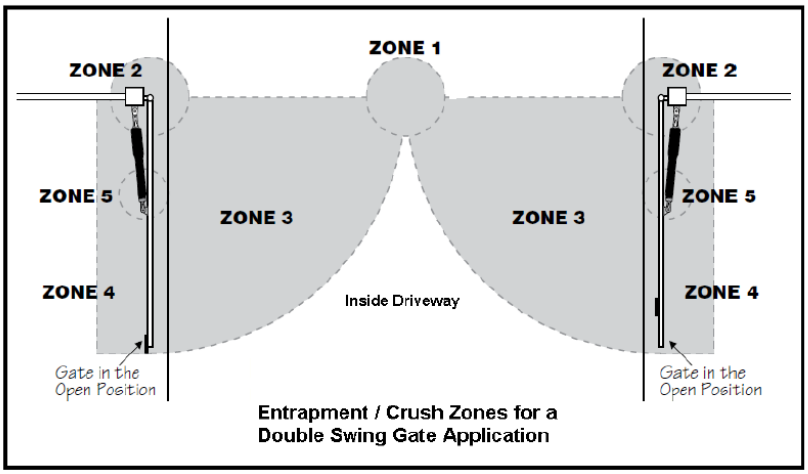
B4. Always keep people and objects away from the gate and its area of travel.

No one should cross the path of a moving gate.

B5. Pay close attention to the diagram below and be aware of these areas at all times. If you identify areas of immediate high risk, please consider adding extra non contact safety device (**Safety Photocells**) and/or contact safety devices (**Gate Safety Edges**) from the selection that is available from the GateMotors website.







Entrapment / Crush Zones for Double Swing Gate Application

Zone 1 - Leading edge of the gate and the fence post

Zone 2 - Between the gate and the gate post

Zone 3 - The travel path of the gate

Zone 4 - The space between the gate in the open position and any object such as a wall, fence, tree etc.

Zone 5 - Pinch points between the opener and gate

C. During Installation:

C1. Install the gate opener on the inside of the property and fence line. **Do not** install an opener on the outside of the gate where the public has access to it.

C2. Be careful with handling moving parts and avoid close proximity to areas where fingers or hands could be pinched.

C3. If key switch and/or push button switches are installed, they should be within sight of the gate, yet located at least 3 Metres (10ft) away from all moving parts of the gate. **Never** install any access control device where a user will be tempted to reach through the gate to activate the gate opener. Secure outdoor or easily accessed gate opener access controls in order to prohibit unauthorised use of your gates.

C4. **Do not** activate your gate opener unless you can see it and can determine that its area of travel is clear of people, pets or other obstructions. Watch the gate through its entire movement.

D. After Installation:

D1. The gate is automatic and could move at any time when activated, posing risk of entrapment. No one should be in contact with an activated gate when it is moving or stationary.

D2. **Do not** attempt to drive into the gate area while the gate is moving; wait until the gate comes to a complete stop.

D3. **Do not** attempt to “beat the gate” while the gate is closing. This is extremely dangerous.

D4. **Do not** allow children or pets near your gate. **Never let children operate or play with gate controls**. Keep the remote controls away from children and unauthorised users; store controls where children and unauthorised users cannot obtain access to them.

D5. To operate this equipment safely, **YOU** must know how to disconnect the opener for manual gate operation (see page 14). If you have read the instructions and still do not understand how to disconnect the opener, contact GateMotors Technical Department immediately for assistance.

D6. Keep the gate and gate opener regularly maintained. Always turn power to the control board OFF before performing any maintenance. Regularly grease the gate hinges and the motors triangular mounting bracket pivot point. Clean the push-pull ram arm tube with a soft cloth and then wipe with liquid Paraffin. This ensures clean, smooth operation of your gate automation system.

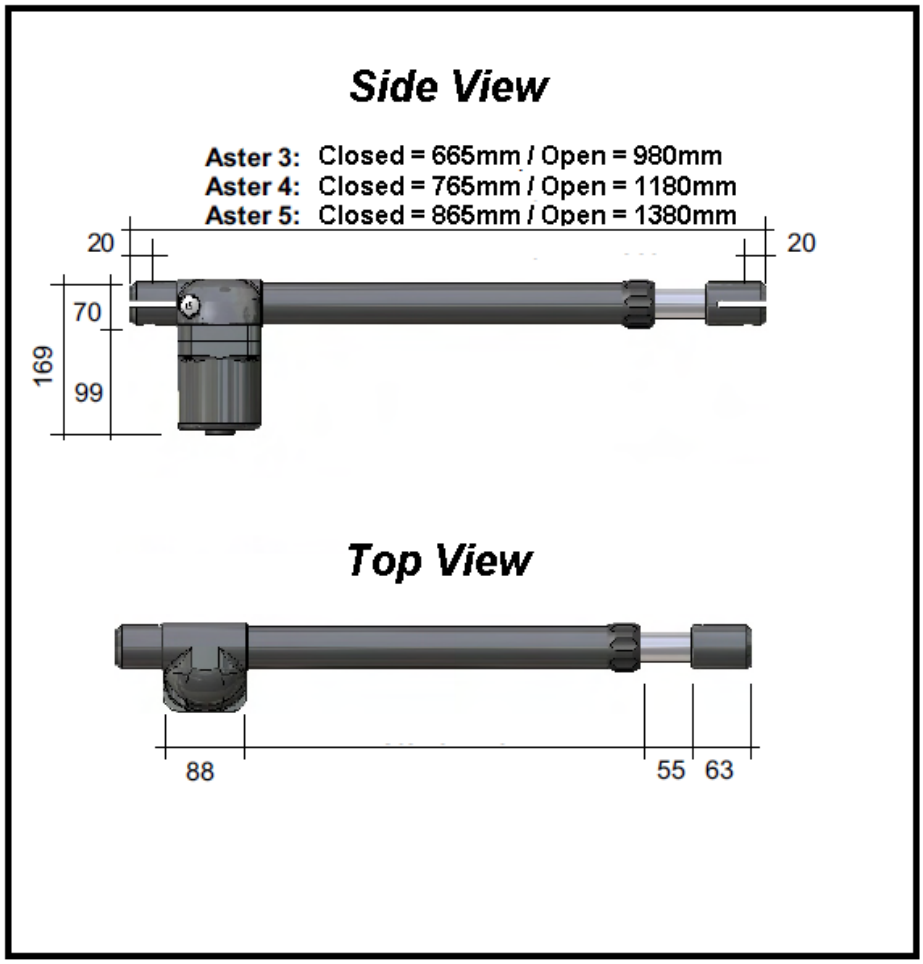
IMPORTANT: Save these safety instructions. Make sure everyone who is using or will be around the gate and gate openers are aware of the dangers associated with gate automation. In the event you sell the property with the gate opener or sell the gate opener, provide a copy of this instruction guide to the new owner.

Should you lose or misplace this manual, a copy can be obtained by downloading one from the GateMotors website (www.gatemotors.co.uk) or by contacting GateMotors by calling on 01202 717191 for the UK customers or (+44)1202717191 for international customers.

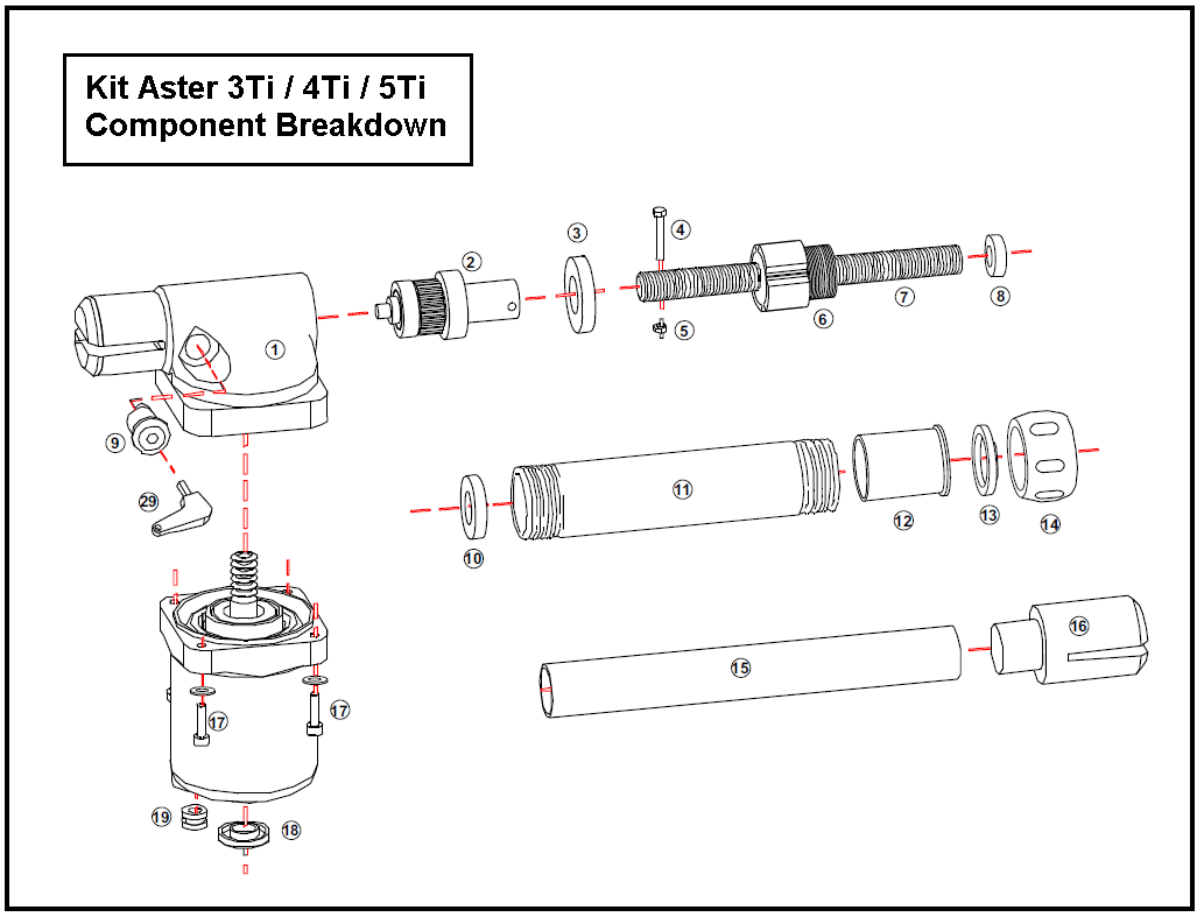
Kit Aster 3Ti/4Ti/5Ti Technical Specification

TECHNICAL CHARACTERISTIC			
MODEL	**Aster 3Ti**	**Aster 4Ti**	**Aster 5Ti**
Power Supply	230v ~ 50Hz		
Current	1,2 - 1,7A		
Motor Power	280W		
Capacitor	8uF		
Thermic Protection	150 Degrees Celcius		
Maximum Thrust	2800N		
Class IP Protection	54		
Revolutions (speed)	1400 g/m		
Working Temperature Range	. -20 to +55 Degrees Celcius		
Leaf's Maximum Length	2M	2.75M	3.5M
Leaf's Maximum Weight	350kg	300Kg	250Kg
Standard Stroke	300mm	400mm	500mm
Maximum Opening Angle (degrees)	110		
90 Degree Angle Opening Time (sec)	17"	22"	27"
Duty Cycle	40%		

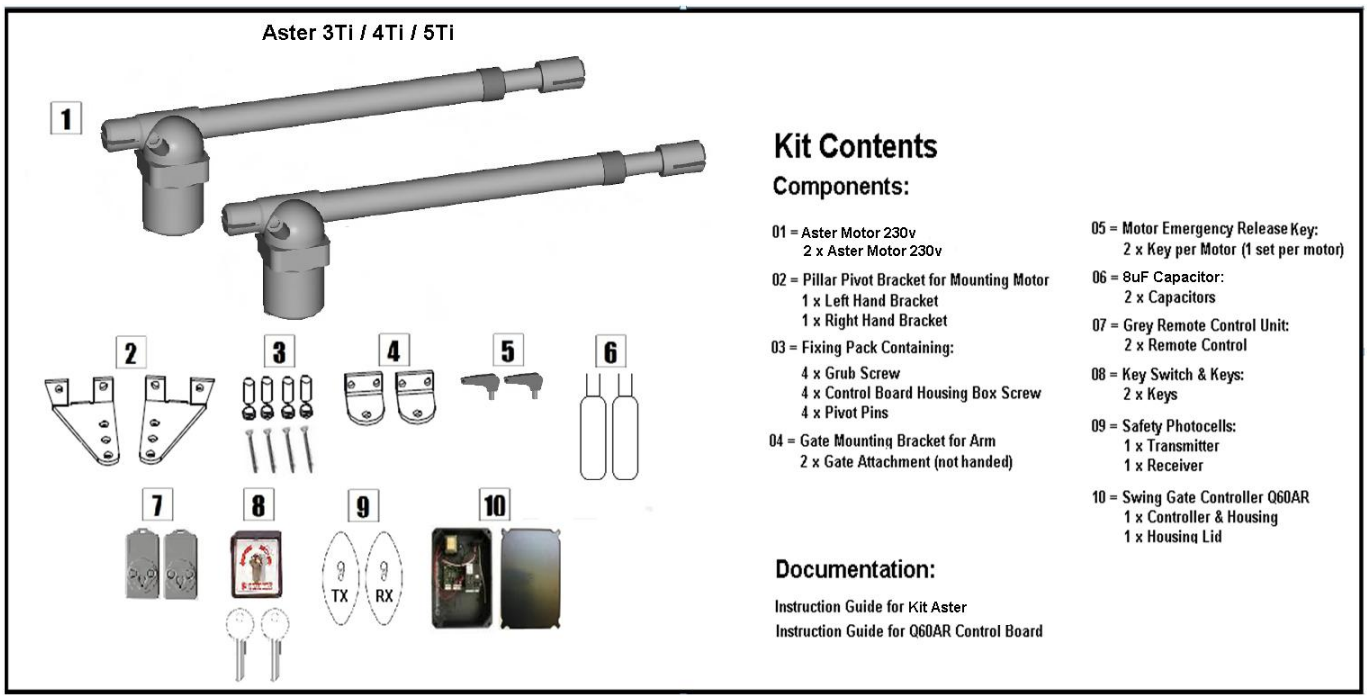
Kit Aster 3Ti/4Ti/5Ti Dimensions



Gate Motors



NB: Please quote above part numbers when enquiring about replacement model 3Ti / 4Ti / 5Ti components from GateMotors.



Tools Needed:

- Tape Measure
- Power Drill
- Adjustable wrench
- Hacksaw or Heavy Duty Bolt Cutters
- Small (flat head) screwdriver
- Small (Pozi Drive) Phillips screwdriver
- Wire Strippers

You may also need these items before you begin the installation (Some of these items can be found on GateMotors website):

Low voltage wire
This will need to be run from the control board to the photocells (transmitter and receiver) and for the key switch (**optional to fit**).

1.5mm 3 Core 230v Armoured Cable
This will be used to transport 230v power form the house to the gate control board.

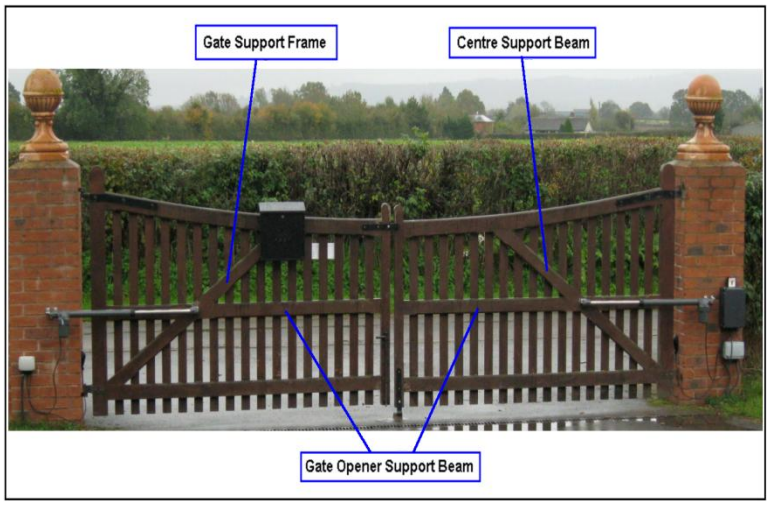
0.75mm SWA Alarm Cable / CAT 5 Cable (low voltage cable)
This will be used to transport power and switching signals from the photocell units to the control board.

PVC Conduit
To encase power cables / low voltage cables that are running between the house and the control board and any cables that are to be laid across your driveway.

Surge Protection
A form of circuit breaker should be fitted between the house and the main gate to protect both the gate control board and the house main fuse box from any power surges that may be experienced.

Fence Post Re-enforcement
If your fence post / pillars are less than 6" in diameter or 6" square should be made of metal instead of wood so that it can remain stable while the opener is moving the gate – if this is not viable, the post may need to be re-enforced to sustain the torque force produced by the gate opener. The curved design of the post bracket works well for installations on round and square posts. Because the post bracket carries the entire thrust of the active opener, firm sturdy anchored bolts should be used in conjunction.

Re-enforced Gate - Wooden

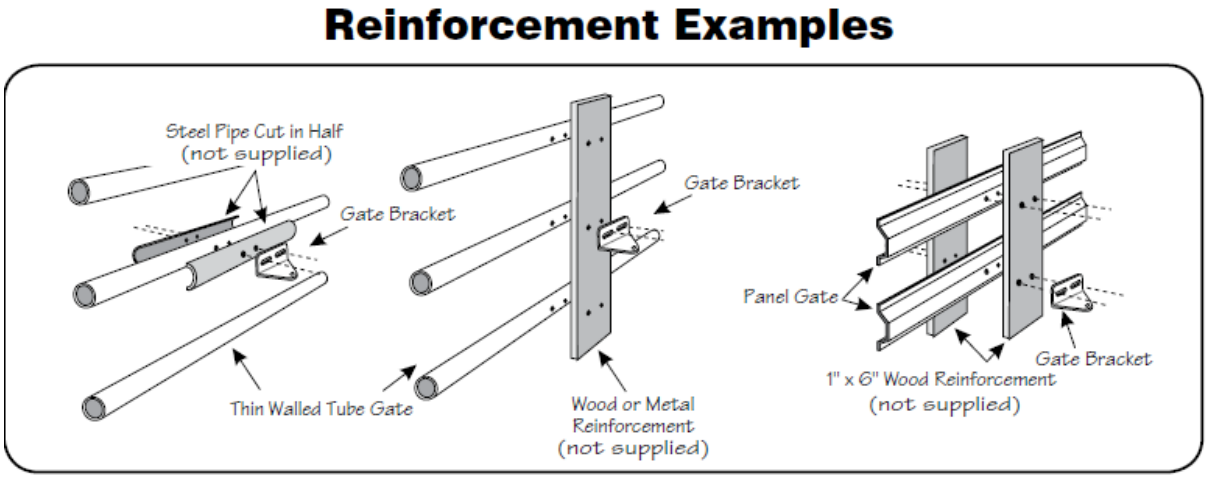


To automate wooden gate, the thickness of the gate should be no less than 70mm and/or have a box boarder supporting frame – illustrated left.

This distributes the torque force produced by the motor and protects the gate from potential damage.

Re-enforced Gate - Metal

Thin walled tube gates – Recommend using a muffler clamp, wood or metal to re-enforce.
Panel gates / Palisade gates – Recommend using wood / metal strips to re-enforce.



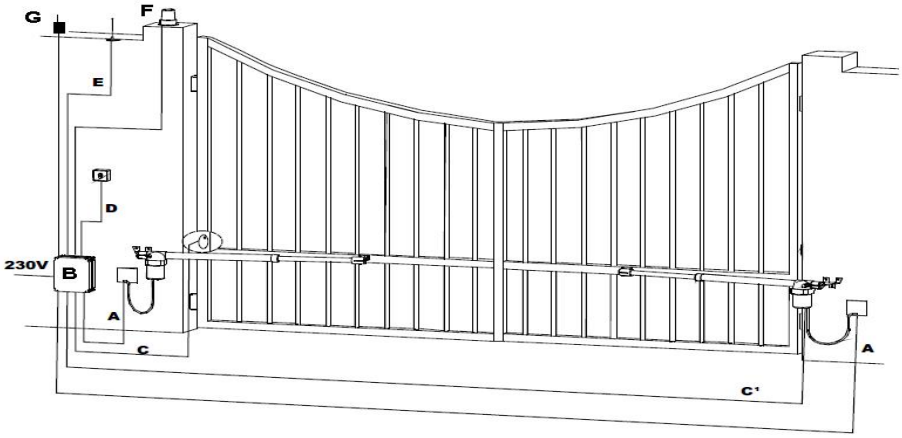
These re-enforcement methods will prevent damage to the opener and the gate when the opener is installed.

Gate Preparation

The gate must be plumb, level and swing freely on its hinges. The Kit Diamond is designed to move the weight of the gate only. If hinges are stiff, loosen with lubricating oil. The gate must be able to move throughout its arc without binding or dragging on the ground. The pillars / posts must be secured into the ground with concrete so it will minimise twist or flex when the gate opener is activated. We recommend you position the opener near the centreline of the gate. The addition of a horizontal or vertical cross support (if one is not already in place) to provide a stable area for mounting the gate bracket is also important.

Installation Overview

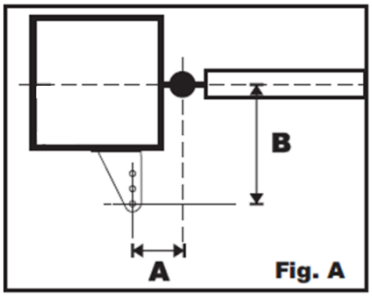
The diagram shown below is an example of a typical installation on a double leaf gate:



		PRODUCTS SHOWN		LEGEND	CABLE REQUIRED
Supplied With Kit	1	Kit Aster Actuator		A	4 core 1.5mm Armoured
Supplied With Kit	2	Gate Control Unit		B	3 core 1.5mm Armoured
Supplied With Kit	3	Photocells	Transmitter Unit	C	2 core 0.75mm SWA/CAT5/Alarm
			Receiver Unit	C'	4 core 0.75mm SWA/CAT5/Alarm
Optional Accessory	4	Extended Aerial		E	Coax Supplied With Aerial
Optional Accessory	5	External Radio Receiver		G	2 core 0.75mm SWA/CAT5/Alarm
Optional Accessory	6	Warning Light		F	2 core 0.75mm SWA/CAT5/Alarm
Supplied With Kit	7	Key Switch		D	2 core 0.75mm SWA/CAT5/Alarm

IMPORTANT: To achieve optimum leverage for the gate opener and ensure long trouble free service, the gate opener needs to be installed within the following the ideal parameters to achieve 90 degree opening angle – measurements are taken from the pillar bracket to the gate bracket when gate is in closed position:

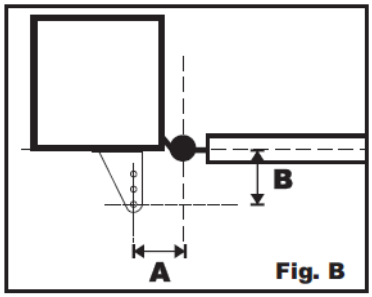
Gate Hinged: Central on Pillar



ASTER 3Ti =	A = 145	B = 145

Total A+B = 290mm

Gate Hinged: On Corner of Pillar



ASTER 4Ti =	A = 195	B = 195
ASTER 5Ti =	A = 245	B = 245

Aster 4Ti - Total A+B = 390mm
Aster 5Ti - Total A+B = 490mm

How to determine fixing dimensions

FIG A

In this scenario the maximum opening angle of the gates will be 90 degrees. The best approach is to put the fixing brackets at the measures indicated in the table on the next page. These quotes are calculated in order to obtain an average lateral speed that does not exceed 12m/minute and will open the gate to 90 degrees.

FIG B

In this scenario the gate can open with an angle greater than 90 degrees:

Aster 3Ti / 4Ti / 5Ti = 110 degrees maximum.

The best approach is to put the fixing brackets at the measures indicated in the table on the next page to achieve initial 90 degrees open angle. To ensure the gate will open past 90 degrees, dimension A **must** be greater than dimension B, BUT dimension B must be reduced by the measurement value that dimension A was increased by. For example:

90 degree angle (Aster 3Ti)	100 degree angle (Aster 3Ti)
Dimension A = 145mm	Dimension A = 160mm
Dimension B = 145mm	Dimension B = 130mm

Quick Guide Reference -
Dimensions A & B for Varying Sizes

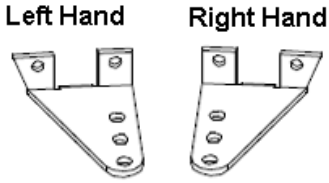
Table to determine motor pivot bracket fixing positions

	200 mm	175 mm	150 mm	125 mm	100 mm	75 mm	50 mm
Aster 3Ti	N/A	N/A	A = 98 B = 202 S1 52	A = 123 B = 177 S1 52	A = 148 B = 152 S1 52	A = 143 B = 157 S1 82	A = 168 B = 132 S1 82
Aster 4Ti	A = 148 B = 252 S1 52	A = 173 B = 227 S1 52	A = 198 B = 202 S1 52	A = 193 B = 207 S1 82	A = 218 B = 182 S1 82	A = 213 B = 187 S1 112	A = 205 B = 195 S2 145
Aster 5Ti	A = 248 B = 252 S1 52	A = 243 B = 257 S1 82	A = 268 B = 232 S1 82	A = 263 B = 237 S1 112	A = 255 B = 245 S2 145	A = 280 B = 220 S2 145	A = 305 B = 195 S2 145

NB: Table above total A+B dimensions includes a 10mm buffer
Aster 3Ti **A+B** = 300mm
Aster 4Ti **A+B** = 400mm
Aster 5Ti **A+B** = 500mm

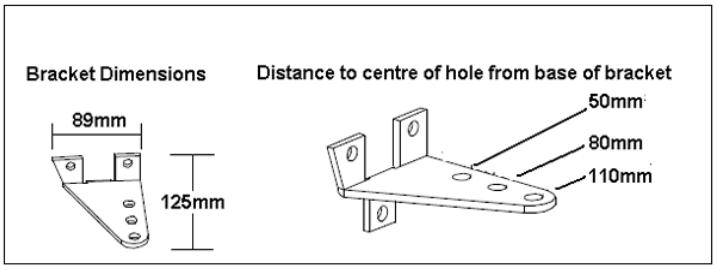
Pivot Bracket (S1) and Dimension B

The motors pillar pivot bracket dimensions **DO** count as part of the Dimension B figure.



This bracket has three holes and is shaped according to left hand or right hand mounting – (illustrated left).

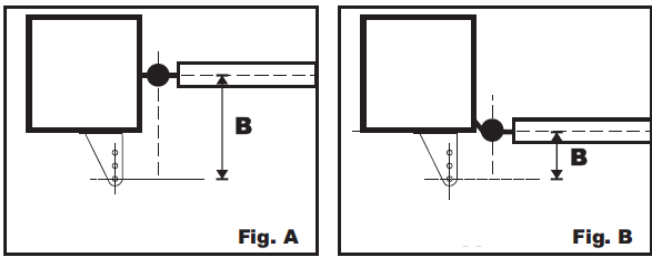
The bracket is fabricated from mild steel and has galvanised coating for durability in weathering. The bracket is designed to be cut-down using an angle grinder for incidences where not all of the bracket holes have been used.



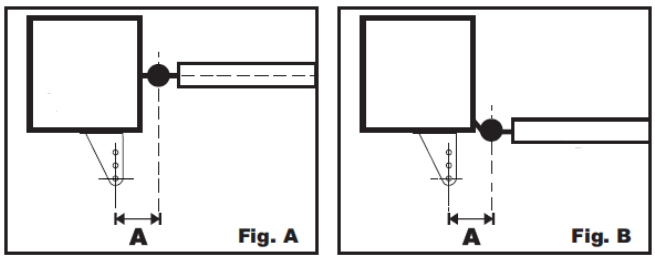
For example, the first hole of the bracket has been used leaving the other two holes vacant. These two holes on the bracket would be removed (cut –off) to allow the motor to pivot freely and obstruction free.

To ensure your dimensions for mounting is correct:

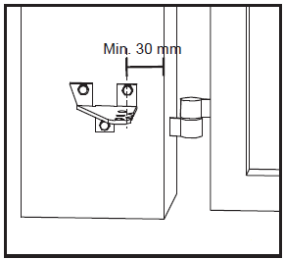
Dimension B: Use tape measure to calculate distance from hinge to the required hole on the pillar bracket and mark accordingly.



Dimension A: use tape measure to calculate distance from the chosen hole on the pillar bracket to the point of contact on your gate leaf where the gate leaf bracket is to be attached and mark accordingly.

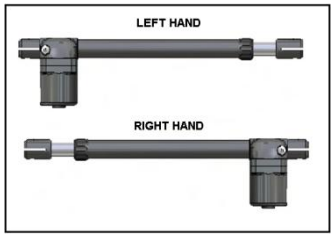


A minimum of 30mm must be allowed from the edge of the pillar, please include this in your calculations – Illustrated below:

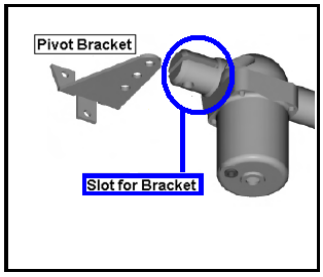


Pivot Bracket: Cut pivot bracket to the required holes if necessary. File any lacerated edges to ensure smooth operation of the motor and fix into position on your pillar as shown below.

Mounting the Motors



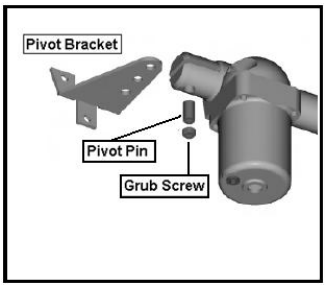
Right or Left Hand Actuators – The Kit Aster motors are supplied in **two** versions, Left hand & Right hand and are specific – as illustrated left. Ensure you are mounting the correct handed motor to the leaf. Looking at the gates from the inside of the drive way - If the leaf is hinged on the left, fit the left hand motor and visa versa.



Anchor the Pivot Bracket (S1) onto your pillar by welding or bolting. Depending on the width and fabric of your pillar, 13mm Bolts minimum can be used. However if your pillar is less than 6", Bolt-through application should be used. In cases of masonry pillars, use chemical or resin to secure bolts or stone (cement) the bracket into position. Fit the motor into position on its pivot bracket as illustrated left.

The motor has a slot designed to be specifically used with the pivot bracket (S1). Slide the motor over the bracket, taking care to align the fixing holes of the bracket and the motor, located on the underside of the motor.

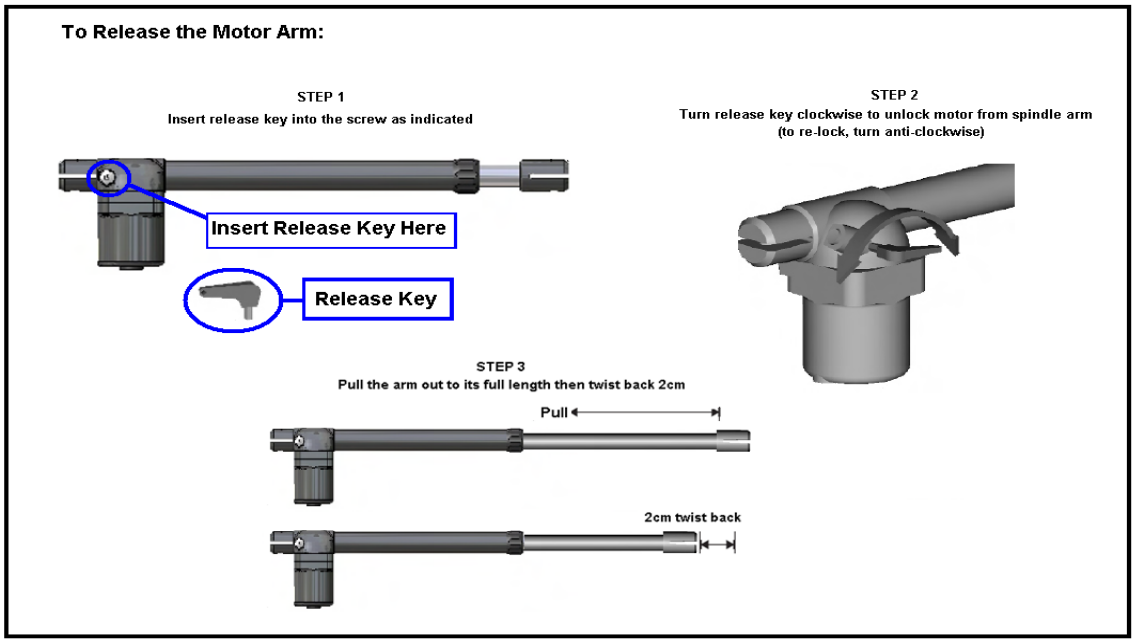
Support the weight of the motor arm so that the full weight of the motor is not hinged on the bracket – if the bracket is not secured in your pillar, the bracket may move or come loose.



Fix motor securely into position by sliding the motor over the bracket, align the fixing holes and place the pivot pin (PR1) through the holes. Secure in place using the grub screw (G1).

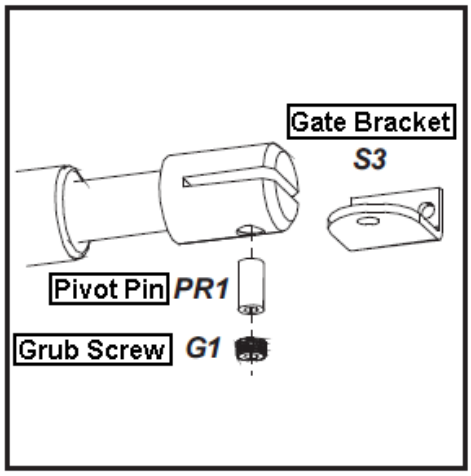
Ensure grub screw is tight to keep the pivot pin in place.

Use the motor release key to unlock the motor and extend the arm fully. Turn back the arm 2cms to allow room for initial mounting to the gate for first time installation. This avoids the arm over stretching if the initial in-rush of power causes the motor to "leap forward".

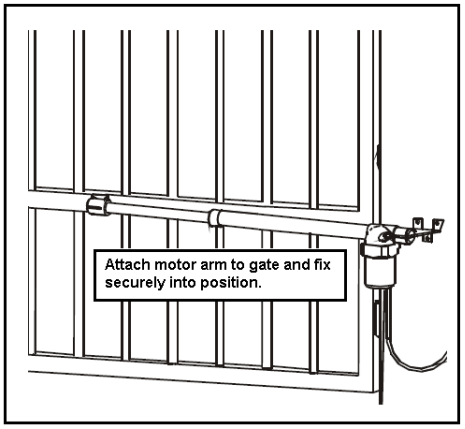

To Release the Motor Arm:
STEP 1
Insert release key into the screw as indicated
Insert Release Key Here
Release Key
STEP 2
Turn release key clockwise to unlock motor from spindle arm
(to re-lock, turn anti-clockwise)
STEP 3
Pull the arm out to its full length then twist back 2cm
Pull
2cm twist back

NOTE: Please do not leave the release key in the motor's release barrel as the metal of the key may corrode due to exposure to the elements and may not function correctly - In addition leaving the key in place may compromise your gates security.

Mounting the Motors (continued):



Affix the gate mounting bracket (S3) to the motor as illustrated below. Slide the bracket into position on the end of the motor arm and place the pivot pin (PR1) into the locating hole. Fix firmly into position using the grub screw (G1)



Mount the arm of the motor onto the gate. Ensure the arm is perfectly straight and check the manual opening of the leaf before definitively fixing the brackets to make sure the gate can open fully to your required angle. Once confirmed - bolt / weld the Gate Mounting bracket (S3) securely into place. When the motor is secured on the gate, engage the locking mechanism of the motor using the release key and remove the release key.

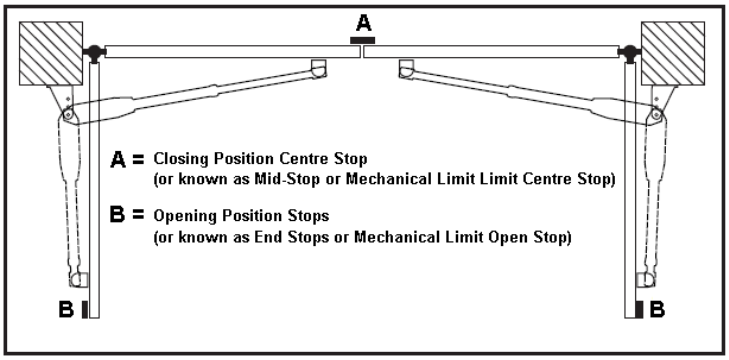
Ensure the release keys for the motors are kept in a secure place.

Motor Release Keys - IMPORTANT

Each motor is supplied with two release keys which are designed for use only with Kit Aster. If keys are lost, GateMotors will be able to supply replacements.

Gate Stops (optional accessory – not included with kit)

Once your closing and opening positions have been finalised, place your gate stops into position to so the gate control board can regulate the opening and closing cycles (illustrated below):


A
A = Closing Position Centre Stop
(or known as Mid-Stop or Mechanical Limit Limit Centre Stop)
B = Opening Position Stops
(or known as End Stops or Mechanical Limit Open Stop)
B
B

Connecting the Motors to the Control Board

Once the motors are in place, we can look to connecting them to the control board. Each motor is supplied and pre-fitted with 1.5M 4 core flex. The cables can be extended and circuit breakers can be used in-between the motor and the control board.

Using extension cable

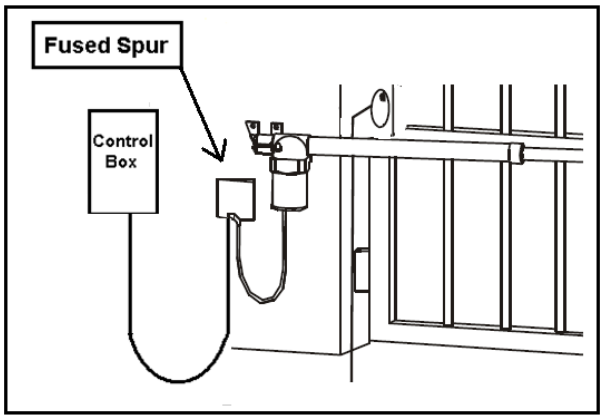
Some installations have a wider drive way than others and fused spurs are not always used. If an extension cable is needed to connect to any of the motors, ensure you use 4 core 1.5mm Armoured Cable. This cable arrangement should contain:

1 x Black Wire
1 x Brown Wire
1 x Blue / Grey Wire (neutral)
1 x Green/Yellow (earth)

Using the appropriate cable colour identification aids with correct connections. The cable should be contained within a suitable flexible conduit when buried under the driveway. Armoured cable is available from GateMotors and is available in 25M, 50M and 100M reels.

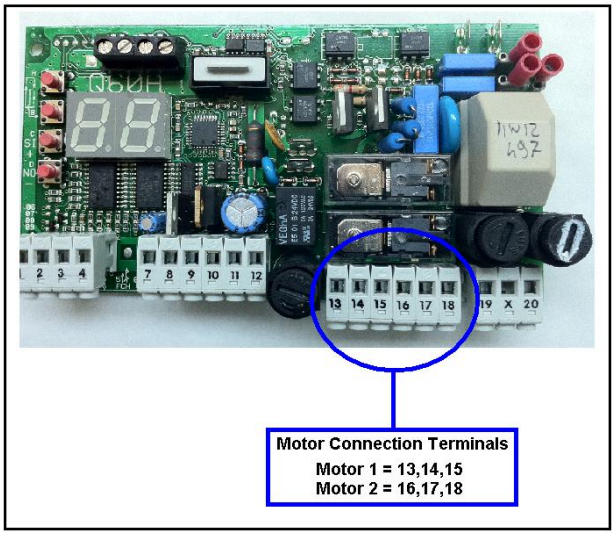
Using Fused Spur (interim circuit breaker) – Optional to Fit

The gate automation control board is equipped with fuses which govern the motors. This stops any power surges reaching the motor and stops any current surge feedback to the control board.



Fused spurs may be used in-between the motor and its connection to the control board to act as an extra means of power surge protection.

Gate Control Board Connection Terminals



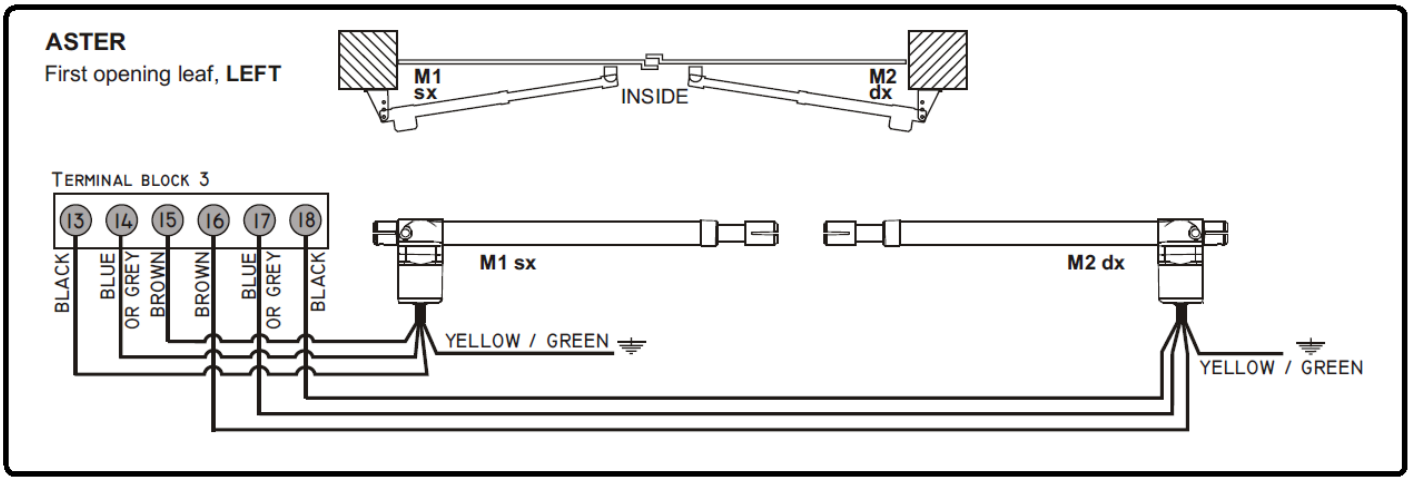
The control board features terminal groupings for the motors.

Motor 1 = 13, 14, 15
Motor 2 = 16, 17, 18

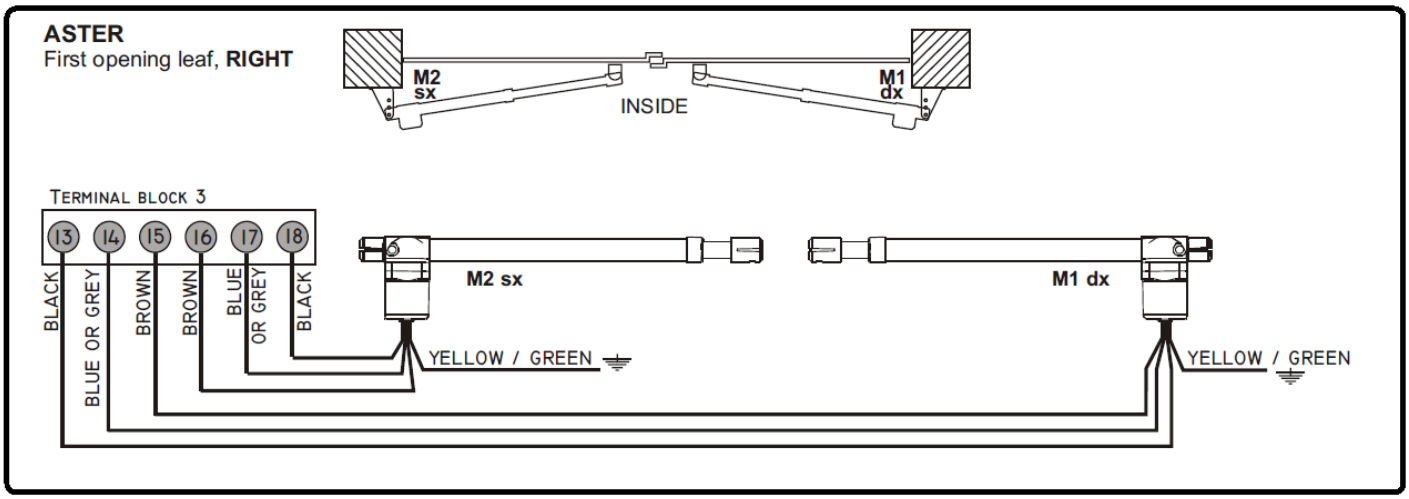
Motor 1 will always start first. This is an operating feature and is designed to cater for gates where an overlay is used on a leaf to keep the gates level. Whichever motor is connected to terminals 13, 14 & 15 will be identified by the control board as Motor 1.

Gate Control Board Connection Terminals (continued):

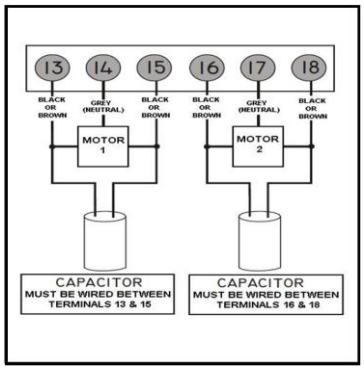
For gates where the LEFT leaf must open FIRST, see below wiring diagram:



For gates where the RIGHT leaf must opn FIRST, see below wiring diagram:



Motor Capacitors:



Each motor is supplied with 8uF capacitors. These are designed to help the motor on initial start-up and continued operation. These capacitors are essential to fit with each motor. If a capacitor is not fitted, the motor may physically vibrate gently and will fail to operate upon command. The control board may display a communication fault code (N1 / N2).

The capacitors are not polarised (negative charge "–"or positive charge "+") and **must** be wired across terminals 13 & 15, 16 & 18 - Illustrated left.

Ensure the capacitor connection and the coloured wire in the terminal it shares with are both touching the metal contact strip within the terminal.

After many years of operation, capacitors may begin to leak their charge. Replacement capacitors are available from GateMotors.

Installation Complete

Now your installation is complete with the fixing of the motors to the gate, please proceed to installing the safety devices and other equipment supplied or purchased with your kit to the control board. Please carefully follow the Q60AR Control Board instruction guide that accompanies the kit to ensure smooth operation of your gate automation.

Warranty

The 12 months Limited Warranty on all goods supplied by GateMotors is on a return for repair basis. Any longer warranty issued by a manufacturer will require these to be returned to the manufacturer's head office or service address, in or outside the United Kingdom. GateMotors shall not be liable in any way for failure of any product supplied.

In particular GateMotors shall not be liable for labour costs involved in replacing faulty items or fault finding. GateMotors warrants to you that the supplied goods will be free from defects in workmanship and materials under normal use for a period of one (1) year from the date that the goods were first purchased by you. If a defect arises and a valid claim under this Limited Warranty is received by GateMotors after the first one hundred and eighty (180) days of the warranty period, GateMotors is entitled to charge you for any reasonable shipping and handling costs made in connection with the repair or replacement of the goods. You must comply with any other return procedures stipulated by GateMotors, if any. What this warranty does not cover - The Limited Warranty does not apply when the goods have been opened or repaired by someone not authorised by GateMotors and does not cover repair or replacement of any goods or part thereof damaged by: misuse, moisture, liquids, proximity or exposure to heat and accident, abuse, non-compliance with the installation and/or usage instructions supplied with the goods, neglect or misapplication. Any disfigurement / removal / tampering of any labels attached to the product, will invalidate the warranty. The Limited Warranty does not cover physical damage to the surface of the product or calibration of the product. This Limited Warranty cannot be transferred to any other person. This Limited Warranty does not affect any legal rights under applicable national legislation governing the sale of consumer goods.

Obtaining Repairs & Replacements

(In warranty & out of warranty) Goods should not be returned for repair or warranty claim without first obtaining a Returns Authorisation Number (RAN) failure to obtain a RAN will result in the returned goods being turned away from our Goods-In and returned to the invoice address as undeliverable. In addition, goods returned for repair or warranty claim must be accompanied by a note indicating the nature of the suspected defect, showing clearly the returnee's full name and address and giving proof of purchase from GateMotors. All goods returned to us for repair or warranty claim will be inspected and repaired / replaced as necessary. In warranty repairs will not carry any parts or labour charges, provided the products were found to be faulty due to component failure. Out of warranty repairs will be subject to charges which cover the labour, replacement components and carriage. We will excise a Lien as described above, where payment for goods or services has not been made. Where we deem a repair to be uneconomical, we will contact you for a decision on our course of action.

Will my gates still open in the winter when it is very cold and icy?

Climate conditions do affect how the internal mechanics operate. During periods where the outside temperature can drop as low as -20 in some parts of the UK, the motors can physically have trouble starting, just like a motor vehicle. Although the internal gears are protected by machine grease, of course anti-freeze cannot be used. If the motors do struggle to push and pull the gates and you are finding them closing short or opening short, a simple adjustment to the torque force is required to give the motors an extra helping hand. This adjustment will increase the power output to the motor to help it mobilise. During the summer season or where the temperature increases, this torque force adjustment may need to be reversed as the mechanics will be able to move a lot more freely and you may find your gates closing quicker or over closing / opening. For the GateMotors Kit Diamond and Aster, if you are finding ice forming on the motor arms, wiping the arm with liquid paraffin will help reduce ice formation. Due to the unique way the motors are fabricated, no ice will get into the motor via the arms, however if it has settled and compacts when the arm retracts to open your gate, the ice build-up may force the arm not to fully retract.

How can I be sure that the gates are securely closed to keep unwelcome visitors out and my children and dogs in?

Each GateMotors control has the option of operating the motors in one of two ways:

- **Full Automatic mode** where a press of the transmitter button will open the gate and hold it open for a predetermined time (adjustable to between five & 90 seconds) and then close it automatically. This way no one needs to remember to shut the gate.
- **Semi Automatic mode** where one press of the button will open the gate as before, but it won't close automatically until the button is pressed again.

What if I am delayed and the gates start to close before I am through the entrance?

Included in each GateMotors kit is a pair of safety photocells that are normally mounted on each gatepost and project a beam across the entrance. If your car or any object (e.g. child or pet) breaks this beam the gate will either not move, or if it has already started to close, stop moving then reverse open again. If you have large / deep gates then an additional pair of photocells should be purchased and mounted on posts just beyond the leading edges of the open gate (see accessories); these will protect the full radial sweep of the gate.

Do my motors require maintenance?

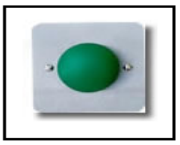
Unlike hydraulic motors, GateMotors electromechanical motors need virtually no maintenance. The internal gears and mechanisms to control the ram arm motion are protected by Machine Grease. All that is required is to keep the motors and the control boards associated safety devices (photocells / anti-crush barriers) free from grime and obvious obstructions including fallen branches et cetera, and to grease any pivot points regularly including the motors pivoting brackets and your gate hinges.

It is recommended to have the gate automation serviced by professional gate installers / gate maintenance specialists to ensure your automation is working safely and efficiently. Installers / Maintenance teams can be found in local directories and internet search engines.

Kit Aster – Accessories

Accessories are Available from GateMotors Website or by Telephone Ordering

Key Fobs & Remotes
All GateMotors key fob transmitters are compatible with all GateMotors gate kits Up to 50 remote controls can be added to each control panel, by following the instructions included with your kit. 3 button key fob remote controller to operate up to 3 sets of gates. Colours available: Grey, Black and Navy Blue.



Push Button Switch
This fantastic marine quality exit button is suited to internal or external use and is constructed from a marine grade Stainless Steel with a front IP rating of IP67. The unit has a 2 amp contact rating @ 12/24v DC with a mechanical lifespan of 1 million operations. Easy to install it is a favourite with customers wanting to offer an easy exit solution from their property.

Horizontal Electro-lock
The electro-lock with expansion card enables the lock to function and communicate with the gate control board. This is plugged into the 10-pin socket located on the gate control board, and then connected using 2-wire configuration. The expansion card transmits 12v charge to the lock which releases its locking pin. In addition, the electro-lock can be used as a stand-alone lock, simply using the two 'Yale' type keys supplied.

Digital Keypads
Available in Solid Metal, Narrow Style Metal Pressure Sensitive or Plastic Membrane Covered. Easy installation and programming together with environmental and anti-vandal resistance with numerous available codes for access control offering different access codes for different people. Surface-mounted keypads are available for internal or external use.

Extended Aerial
Substitutes the standard gate control boards internal built-in aerial to extend the range of your transmitters from 30M to 80m (max) in free field conditions. The 2m cable length makes this product easy to install on a variety of applications from fence posts to pillars.

Blinker Warning Light
A flashing blinker / warning light can alert people to the operation of the gates. The blinker light is compatible with of the Electric gate kits that we sell. Oval blinker with 2 lamps 10W. Height approx 18 cms.

Vehicle Loop Detector
1 or 2 channel loop detectors allow gate release for vehicles entering or exiting the property. Easy to fit to any existing GateMotor gate system. Very discreet; loop fits underneath your driveway and allows gate release to vehicles exiting or entering the property - no need to push a button. (Loop cable needed – sold separately)

7 Day Timer
The GateMotors 7 day timer can be configured to provides 7 day, 24 hour or 5 day/2 day operation and either 2 ON/OFF's or 3 ON/OFF's per day, allowing the time switch to be tailored to the consumer's specific requirements. The GateMotors 7 day timer is the simple and secure solution to all postman/ newspaper delivery/ tradesman / employees entry requirements.

GSM Mobile Gate Opener
Fed up with losing key fobs? Have you had someone waiting to enter your property when you're running late to meet them? If you answer yes to any of the above, the GSM Mobile Gate Opener is the instant solution! The unit is a wireless control on/off switch that connects to the GSM cell phone network. It is activated by calling its cell phone number (there are no call costs incurred when dialling to the unit), it will then reject the call without answering and opens the gate.

Security Camera Light
An innovative self contained video and photo system will automatically record images when movement is detected within 9M range - 3 megapixel resolution for pictures and video with sound up to 60 seconds long all stored on a supplied SD memory card. With its powerful Halogen floodlight, this unit works day and night, giving you peace of mind and protection for your property.

These accessories are popular products from GateMotors. Please visit www.gatemotors.co.uk for FULL product listing along with technical specifications and installation guides. If you have a question about any of the accessories featured in this guide, please call 01202 717191.

Comments & Feedback

We thank you for taking the time in reading and following the new version of our instructions. This instruction guide has been compiled from comments and feedbacks received from previous / existing customers who are familiar with our automation and had followed the old version (also included alongside with this guide). The aim of this guide is to appeal to all "walks" of life - from end users to Tradesmen. We understand that not everyone can follow complex wiring diagrams and often instructions can be over complicated. We, at Gate Motors, feel that a "one size fits all" guide, with simple straight forward jargon-free would benefit the customer & installers alike and promote safe operation of the automation.

Your feedback is valuable to us to help us with continued development and fine tuning of our instructions to suit customers' needs.

If there is a subject or topic relating to the control board and its functions that you feel we could include, re-write or present in a different way, please let us know by email on sales@gatemotors.co.uk.

Author: - G.Opie
Published: - September 2011

For more information on GateMotors full line of automatic gate openers and access controls visit our website at www.gatemotors.co.uk

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Phone Technical Lines
UK: **0905 235 1700*** (service available 8:30am to 5:30pm Monday to Friday only, closed Weekends and Public Holidays)
ROI: **156 099 9667**** (service available 8:30am to 5:30pm Monday to Friday only, closed Weekends and Public Holidays)
Email: support@gatemotors.co.uk

*UK calls to this number are billed by the second and cost £1.02 per minute from a standard landline; other networks charges may also apply.
**IRISH calls to this number are billed by the second and cost €1.25 per minute from a standard landline; other networks charges may also apply.
Service is provided by Digital Select Ltd, 271 Regent Street, London, W1B 2ES whose helpline number is 0844 448 0165

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